

Please replace the paragraph beginning on page 37, line 10 with the following rewritten paragraph:

A11 --A semiconductor device is preferably further provided with a foundation metal layer made of Ti, Ti-W, Cr, or a metal having any of those elements as its main component, under the main conductor layer.--

IN THE CLAIMS

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✓ Please cancel claims 11-16, without prejudice or disclaimer.

Please replace claims 1, 8 and 10 with the following rewritten claims:

Sub B1
A12

1. (Amended) A semiconductor device, comprising:
a main conductor layer having an end that is electrically connected to an electrode pad;
an insulating layer having an opening section on said main conductor layer; and
a protrudent electrode electrically connected to said main conductor layer via said opening section,
said semiconductor device further comprising:
a metal layer provided only on a bottom surface of the opening section on the main conductor layer so that said metal layer is provided between said main conductor layer and said protrudent electrode.

A13 8. (Amended) The semiconductor device as set forth in Claim 1, further comprising:

a barrier metal layer made of Ni or a metal having Ni as its main component, on an entire top surface of said main conductor layer.

10. (Amended) The semiconductor device as set forth in Claim 1, further

A14 comprising:

a foundation metal layer made of Ti, Ti-W, Cr, or a metal having any of those elements as its main component, under said main conductor layer.

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Please add the following new claims 17-28:

Sub B3
A15

--17. A semiconductor device, comprising:
a conductive wiring layer connected to an electrode pad formed on a semiconductor substrate;
an insulating layer formed on the wiring layer and having an opening therein which exposes an upper surface portion of the wiring layer;
a metal layer provided in the opening only on the exposed upper surface portion of the wiring layer; and
a protruding electrode electrically connected to the wiring layer via the metal layer.

18. The semiconductor device according to claim 17, wherein the conductive wiring layer comprises first and second metal layers.

clm 18 → conductive w/ 2 metal layers

clm 19 → 1st of conductive 2 metal layer

⇒ barrier adhesion

19. The semiconductor device according to claim 18, wherein the first metal layer comprises a barrier metal layer and a metal adhesion layer.

20. The semiconductor device according to claim 17, wherein the metal layer in the opening comprises a barrier metal layer and a top layer.

21. The semiconductor device according to claim 20, wherein the thickness of the top layer is between 0.003 micrometers and 1 micrometer.

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A15
22. The semiconductor device according to claim 17, wherein an upper portion of the protruding electrode is wider than the opening formed in the insulating layer.

23. The semiconductor device according to claim 17, wherein the wiring layer is connected to the electrode pad via an opening formed in another insulating layer.

24. The semiconductor device according to claim 23, wherein the other insulating layer comprises an inorganic layer and an organic layer. (pg 15)
SiO₂ polyimide

Sub
BY
25. A semiconductor device, comprising:
a wiring layer connected to an electrode pad formed on a semiconductor substrate;
an insulating layer formed on the wiring layer and having an opening therein which exposes an upper surface portion of the wiring layer;

a metal layer provided in the opening only on the exposed upper surface portion of the wiring layer; and

a protruding electrode electrically connected to the wiring layer via the metal layer,

wherein the wiring layer comprises a first, second and third metal layers, the third metal layer having low reactivity with the material of the insulating layer.

obvious / inherent characteristics (third is on the bottom)

26. The semiconductor device according to claim 25, wherein the metal layer in the opening comprises Au. $\approx 4m.2$

27. The semiconductor device according to claim 25, wherein the third metal layer of the wiring layer comprises Ni.

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28. The semiconductor device according to claim 25, wherein the insulating layer comprises polyimide resin. \rightarrow *typo*

REMARKS

Reconsideration and allowance of the subject patent application are respectfully requested.

The title of the invention has been changed to be more clearly indicative of the invention to which the claims are directed.

The disclosure has been amended to correct minor informalities found during preparation of this response. Entry of these amendments to the disclosure is respectfully requested.